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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,783	07/09/2001	Brian Fudge	990452	9313

23696 7590 12/17/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER	
KOSTAK, VICTOR R	
ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/901,783	FUDGE ET AL.	
	Examiner	Art Unit	
	Victor R. Kostak	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40 and 49-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-40 and 49-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 1-40 and 49-55 are now objected to because of the following informalities:

a) each of the six independent claims now includes a *"wherein"* clause containing an improper verb tense. Claim 1 recites *"wherein ... having"* but should instead recite "*has*", or the term *"wherein"* should be deleted. The "*wherein*" clause in claims 16, 24 and 34 should recite "*defines*" rather than "*defining*" or "*wherein*" should be deleted. The "*wherein*" clause in claims 49 and 55 should recite "*comprises*" rather than "*comprising*", or again the term "*wherein*" should instead be deleted.

b) in claim 13, the dependency appears to now be from claim 8, but the punctuation used is a combination of underlining and bracketing, and bracketing indicates removal of text (note rule 121). Applicant therefore makes it ambiguous if claim 8 is intended to be the base claim (this is brought to light in order to preempt any problems in the patent printing stage). Applicant includes bracketing where it should not be used throughout the claims.

c) in the last line of claim 19, "*displayed*" should be changed to --*stored*--.

d) in line 7 of claim 34, *"the input device"* lacks antecedent basis; in lines 7-8 the phrase "*the programmable format data store"* lacks antecedence; and in the last line of claim 34, *"the format data store"* also lacks antecedent basis.

e) in claim 49 line 6, "*image*" should be inserted before "*having*". Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Or (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 16, 17, 20, 23-25, 27, 34, 35 and 49-55 are now rejected under 35 U.S.C. 102(e) as being anticipated by Velez et al.

The video processing system of Velez (noting particularly Figs. 1, 2 and 4) includes storing a two-dimensional array of pixel data in a frame memory 50 (Fig. 1) that contains separate first and second regions, accommodating a main picture and a sub-picture, the video data being digital (e.g. col. 3 lines 9-10). A memory 124 can be a ROM (col. 6 lines 34-38) which serves as a table that stores scaling parameters used for formatting the video data of both image areas separately, and according to any of different scale amounts (col. 3 line 61 – col. 4 line 1), thereby constituting different display formats. Processing unit 100 (shown in separate stages in Fig. 4) reads the stored digital video data and formats the data of both the main and sub-pictures according to the selected scaling parameters from the ROM table, and subsequently outputs the converted composite image data to a display 18 (Fig. 1), thereby meeting claims 1, 16 and 23.

As for claims 24 and 34, the storage processing and converting system is programmable (e.g. col. 5 line 62 – col. 6 line 9).

As for claims 2 and 17, plural frames are sequentially stored as the video stream is applied as continuous serial data to the memory 50.

Regarding claims 5 and 20, scaling parameters pertaining to interlaced data are stored because interlaced data can be applied to the scaling processor (e.g. col. 1 lines 18-31).

As for claims 7 and 22, Velez specifically allows for any device that manipulates digital information based on programming instructions (e.g. col. 5 lines 62-65), which accordingly covers software, and which be nature, and as recognized by applicant, is replaceable and updatable.

As for claim 25, frame memory 50, as the input device receiving serial frame data, is a buffer memory as shown.

Considering claim 27, the sub-picture is a decimated version of a full-scaled picture, and is received by the frame buffer 50.

As for claims 49, 52 and 53 and 53, the scaling parameters, which are coefficients applied to the pixels (noting the equations in col. 4) of both the main and sub-pictures, correspond to the claimed control data.

As for claims 50 and 54, rendering circuit 16 is electronically associated with the processing means and responsive to the control data for ultimately reproducing the scaled PIP imagery on display unit 18.

Regarding claims 51 and 55, the scaling (control) data is selectable by the user, and is applied to the pixel data by processor 100.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4, 18 and 19 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Velez et al.

Regarding claims 3 and 18, it would have been obvious to apply progressively-formatted video for scaling for the benefit of providing the user with as diverse and wide-ranging video data options as can be available, as is a typical consideration of the video producers. Velez suggests such as he points out that the input source can be obtained through cable, satellite, VCRs and DVDs (col. 1 lines 11-16), and progressive HDTV was at the time of filing an established video format.

As for claims 4 and 19, the output format would be different form that of the input format (noting again col. 1 lines 18-31), and since scaling is applied to the dual images.

4. Claims 6 and 21 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Velez et al. in view of Micic et al.

A typical consideration of one involved in the video production and presentation field is to provide the user with as much a variety of programming as can be offered, thereby accommodating different tastes of as large a body of viewers as possible, as was stated previously.

Micic also discloses presenting different imagery per respective sections of a composite screen (Figs. 1, 2), and points out that both dynamic and static images can be displayed (e.g. col. 5 lines 9-14).

It would have been obvious to one of ordinary skill in the art to display dynamic or still imagery as disclosed by Micic, in the system of Velez to thereby allow the user to enjoy as extensive a viewing selection as can be made available, thereby meeting claims 6 and 21.

5. Claims s 26, 28 and 36 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Velez et al. in view of Ishikawa et al.

Velez processes the luminance and chrominance data that forms the composite video data together (YcrCb components are disclosed: col. 5 line 51) but does not describe in detail the component data transfer.

Ishikawa also separately processes different areas of video stored in different memories (e.g. Figs. 6, 7, 10) and specifically discloses the separate parallel processing of the luminance and chrominance components (e.g. Fig. 10, outputs of elements 1001, 1003), eventually combining the data to present a composite color image.

It would have been obvious to one of ordinary skill in the art to incorporate parallel processing of the luminance and chrominance data in Velez as taught by Ishikawa for the clear purpose of keeping the data associated per frame together and make the processing more time efficient, thereby meeting claims 28 and 36.

As for claim 26, it would also have been obvious to use a FIFO as an input buffer as taught by Ishikawa (e.g. col. 7 lines 40-41) in Velez to thereby account for the serial data of the serial stream in the order in which it comes, which in turn would transfer data for processing in the same time-sequential order (such being characteristic of FIFO memories), thereby processing the video streams continuously through their duration.

6. Claims 8-13, 29-33 and 37-40 are now rejected under 35 U.S.C. 103(a) as being unpatentable over Velez et al. in view of Eitzmann et al. (of record).

Velez does not discloses in any detail the processing of the sync data because he focuses on the specific processing of the separate image areas. Nonetheless, ensuring proper synchronization is necessary to have for both the main and sub-picture positioning, as well as for identifying areas for format processing.

Reviewing Eitzmann, he discloses a state machine (Fig. 5) that he uses for controlling synchronization in his video formatting. The state machine shown is dedicated to the sync processing and involves minimum storage components.

It would have been obvious to use the state machine of Eitzmann in the formatter of Velez for the purpose of providing appropriate synchronization with a dedicated circuit arrangement that involves minimum storage components, thereby meeting claims 8 and 29.

As for claims 9-11, 30-32 and 37-39, the state machine of Eitzmann incorporated in Velez accounts for the vertical and horizontal blanking signals.

Regarding claims 12, 33 and 40, blanking pixels would also be involved in Velez since scaling downward is one option (col. 3 line 67) which requires removal of data in some areas. Up-scaling (col. 3 line 64 of Velez) could also require some pixel blanking if an initial part of an image includes some blank areas which would need to be enlarged by generating more blank areas.

As for claim 13, buffering is well known as disclosed by Velez (noted previously) and would have been obvious to include in any stage of the processing for the purpose of smoothing data transfer.

7. Claim 14 is now rejected under 35 U.S.C. 103(a) as being unpatentable over Velez et al. in view of Eitzmann et al. and Ishikawa et al.

It would have been obvious to use a FIFO as a buffer as disclosed by Ishikawa, in the system of Velez modified by Eitzmann for the clear benefit of processing the incoming data in the order it was input, thereby maintaining consistent processing of the continuous data stream as it passes through the processing stages.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.

Victor R. Kostak
Primary Examiner
Art Unit 2614

VRK